

Portable Automatic Firewood Processor



Innovative Firewood Production Machine Reduces Labor and Production Costs

Firewood production is notorious as being one of the toughest and most labor-intensive processes in the wood products industry, and in the past many companies have been reluctant to be in the firewood business for this reason. Rainier Hydraulics, Inc., with the help of a grant from the Department of Energy's Inventions and Innovation Program, designed and developed a machine that eliminates the back-breaking labor and reduces labor costs of producing firewood, thus making firewood production profitable. Conventional firewood processors use chain or circle saws, separate splitter heads, infeed conveyors, and live log decks. The new machine, the Chomper, uses a shear blade for cutting logs to length and requires only one person to operate. All of the competitive processors require a minimum of two people to operate and other supporting equipment.

The Chomper is the only firewood processor available that automatically shears the log to desired firewood length and splits it into 2, 4 or 8 pieces depending on log diameter. The Chomper can process tree length logs up to 16 inches in diameter at ground level. The shear blade system used on the Chomper eliminates the down time incurred by conventional firewood processors that process dirty, muddy, rock encrusted logs because the shear blade never needs sharpening. Several models are available to meet the requirements from the small to large commercial producers. All models are portable and can be towed with a $\frac{3}{4}$ -ton pickup. In a study of firewood drying for 9 species of wood, the Chomper was shown to achieve the same moisture level or dryness in 60 days that the conventionally sawn and split processing method achieved in 127 days. Thus, firewood produced by the Chomper can be sold as seasoned wood much sooner, thereby increasing profits.



The Chomper Model 16 with Belt Conveyor

Overview

- ◆ Developed by Rainier Hydraulics, Inc.
- ◆ Commercialized in 1984
- ◆ More than 200 units sold since 1984

Applications

Commercial firewood production industry

Capabilities

- ◆ Requires just a single operator.
- ◆ Offers automatic operation in a number of models or sizes.
- ◆ Are mobile and easily transported to the worksite.

Benefits

- ◆ Reduces labor costs by at least 50% versus conventional methods of firewood production.
- ◆ Requires 50% of the drying time of conventional sawn and split wood, thus increasing profits.
- ◆ Increases reliability, thus reducing maintenance costs.
- ◆ Eliminates sawdust production.